
s e c t i o n 5

Domestic Freight Activity

Domestic Freight Activity by Mode

(Millions of metric tons)

	Canada			Mexico			United States		
	1990	1995	1996	1990	1995	1996	1990	1995	1996
Total	623.3	711.8	734.6	380.1	429.3	445.2	6,079.3	7,062.0	7,320.7
Air	0.4	0.4	0.4	0.1	0.1	0.1	7.7	8.5	9.8
Water transport	60.4	50.5	48.8	30.6	31.8	31.6	1,014.0	985.4	991.9
Coastal shipping	26.2	22.6	21.1	30.6	31.8	31.6	270.9	241.9	242.6
Great Lakes	10.6	7.7	8.8	NA	NA	NA	99.9	105.3	104.2
Inland waterways ^a	23.6	20.2	18.9	NA	NA	NA	643.2	638.1	645.1
Pipeline	221.4	290.6	303.5	U	U	U	1,416.2	1,551.6	1,611.8
Crude oil and petroleum products	145.8	174.5	183.4	U	U	U	958.9	1,017.0	1,067.8
Natural gas	75.6	116.1	120.1	U	U	U	457.3	534.6	544.0
Rail	191.8	203.0	200.0	34.7	30.7	30.2	1,292.6	1,405.8	1,461.4
Road	149.3	167.3	181.9	314.7	366.7	383.3	2,348.7	3,110.7	3,245.9

^aCommercially navigable.

KEY: NA = Not applicable. U = Data are unavailable.

NOTES

Canada

Road: Includes *only* activity of Canadian domiciled for-hire carriers with annual intercity revenues greater than or equal to 1 million Canadian dollars; excludes local (less than 24 kilometers) deliveries and deliveries made by private trucks and small for-hire carriers.

Pipeline: Data are for both oil pipelines and natural gas.

Mexico

Total: Does not include data for pipelines because the data are unavailable.

Road: Includes only intercity truck activity on the Mexican federal highway system.

United States

Road: Data are for *intercity* for-hire and private truck only.

Pipeline: Data are for both oil pipelines and natural gas.

SOURCES

Canada

Air: Statistics Canada. *Canadian Civil Aviation, Catalogue No. 51-206-XPB*. (Ottawa, Ont.: various years).

Coastal shipping, Great Lakes and inland waterways and rail: Transport Canada. Economic Analysis Directorate based on Statistics Canada data. (Ottawa, Ont.: 1998).

Pipeline: Statistics Canada. *Oil Pipeline Transport, Catalogue No. 55-201-XPB*, and *Gas Utilities Transport and Distribution Systems, Catalogue No. 57-205-XPB*. (Ottawa, Ont.: various years).

Rail: Transport Canada. Economic Analysis Directorate, based on Statistics Canada data. (Ottawa, Ont.: 1998).

Road: Statistics Canada. *Trucking in Canada, Catalogue No. 53-222-XPB*. (Ottawa, Ont.: various years).

Mexico

Air: Secretaría de Comunicaciones y Transportes. Dirección General de Aeronáutica Civil. *La Aviación Mexicana en Cifras 1990-1996*. (Mexico City, D.F.: 1998).Water transport: Secretaría de Comunicaciones y Transportes. Coordinación General de Puertos y Marina Mercante. *Los Puertos Mexicanos en Cifras 1990-1996*. (Mexico City, D.F.: 1997).Rail: Secretaría de Comunicaciones y Transportes. Based on data from Ferrocarriles Nacionales de México. *Series Estadísticas 1990, 1995 and 1996*. (Mexico City, D.F.: various years).

Road: Secretaría de Comunicaciones y Transportes. Dirección General de Autotransporte Federal. (Mexico City, D.F.: 1998).

t a b l e 5-1**Domestic Freight Activity by Mode—Continued****United States**

Air: U.S. Department of Transportation. Bureau of Transportation Statistics. Office of Airline Information. *Air Carrier Traffic Statistics*. (Washington, DC: various years).

Coastal shipping, Great Lakes and inland waterways: U.S. Army Corps of Engineers. *Waterborne Commerce of the U.S., Part 5*. (New Orleans, LA: Annual issues).

Pipeline, crude oil and petroleum products: Association of Oil Pipe Lines. *Shifts in Petroleum Transportation*. (Washington, DC: various years).

Pipeline, natural gas: U.S. Department of Transportation. Bureau of Transportation Statistics. Special tabulation based on Department of Energy data. (Washington, DC: 1999).

Rail: Association of American Railroads. *Railroad Facts, 1997*. (Washington, DC: 1997).

Road: Eno Transportation Foundation, Inc. *Transportation in America, 1997*. (Lansdowne, VA: 1997).

t a b l e 5-2

Domestic Freight Activity by Mode

(Billions (thousand millions) of metric ton-kilometers)

	Canada			Mexico			United States		
	1990	1995	1996	1990	1995	1996	1990	1995	1996
Total	520.7	602.8	614.3	154.1	206.0	212.7	5,070.0	5,784.7	5,916.2
Air	0.5	0.6	0.6	0.9	1.2	1.0	10.9	15.6	16.0
Water transport	53.7	42.5	40.2	19.3	20.0	19.9	1,217.0	1,179.3	1,116.4
Coastal shipping	14.0	10.5	10.3	19.3	20.0	19.9	699.5	642.9	595.8
Great Lakes	7.3	5.1	5.4	NA	NA	NA	89.0	87.2	85.2
Inland waterways ^a	32.4	26.9	24.5	NA	NA	NA	428.5	449.2	435.5
Pipeline	212.2	273.9	280.6	U	U	U	1,259.5	1,338.9	1,364.6
Crude oil and petroleum products	102.8	103.9	105.0	U	U	U	852.8	877.6	904.0
Natural gas	109.4	170.0	175.6	U	U	U	406.7	461.3	460.6
Rail	199.6	220.0	221.4	25.0	22.0	21.0	1,509.6	1,906.3	1,979.7
Road	54.7	65.8	71.5	108.9	162.8	170.8	1,073.1	1,344.6	1,439.5

^aCommercially navigable.

KEY: NA = Not applicable. U = Data are unavailable.

NOTES

Canada

Road: Data include only activity of Canadian domiciled for-hire carriers with annual intercity revenues greater than or equal to 1 million Canadian dollars. Data excludes local (less than 24 kilometers) deliveries, and deliveries made by private trucks and small for-hire carriers.

Pipeline: Data are for both oil pipelines and natural gas.

Mexico

Total: Does not include data for pipelines because the data are unavailable.

Road: Includes only intercity truck activity on the Mexican federal highway system.

United States

Pipeline: Data are for both oil pipelines and natural gas.

Road: Data are for *intercity* for-hire and private truck only.

SOURCES

Canada

Air: Statistics Canada. *Canadian Civil Aviation, Catalogue No. 51-206-XPB*. (Ottawa, Ont.: various years).

Coastal shipping, Great Lakes and inland waterways and rail: Transport Canada. Economic Analysis Directorate based on Statistics Canada data. (Ottawa, Ont.: 1998).

Pipeline: Statistics Canada. *Oil Pipeline Transport, Catalogue 55-201-XPB*, and *Gas Utilities Transport and Distribution Systems, Catalogue No. 57-205-XPB*. (Ottawa, Ont.: various years).

Rail: Transport Canada. Economic Analysis Directorate, based on Statistics Canada data. (Ottawa, Ont: 1998).

Road: Statistics Canada. *Trucking in Canada, Catalogue No. 53-222-XPB*. (Ottawa, Ont.: various years).

Mexico

Air: Secretaría de Comunicaciones y Transportes. Dirección General de Aeronáutica Civil. *La Aviación Mexicana en Cifras 1990-1996*. (Mexico City, D.F.: 1997).

Water transport: Secretaría de Comunicaciones y Transportes. Coordinación General de Puertos y Marina Mercante. *Los Puertos Mexicanos en Cifras 1990-1996*. (Mexico City, D.F.: 1997).

Rail: Secretaría de Comunicaciones y Transportes. Based on data from Ferrocarriles Nacionales de México. *Series Estadísticas 1990, 1995 and 1996*. (Mexico City, D.F.: various years).

Road: Secretaría de Comunicaciones y Transportes. Dirección General de Autotransporte Federal. (Mexico City, D.F.: 1998).

Domestic Freight Activity by Mode—*Continued*

United States

Air: U.S. Department of Transportation. Bureau of Transportation Statistics. Office of Airline Information. *Air Carrier Traffic Statistics*. (Washington, DC: various years).

Coastal shipping, Great Lakes and inland waterways: U.S. Army Corps of Engineers. *Waterborne Commerce of the U.S., Part 5*. (New Orleans, LA: Annual issues).

Pipeline, crude oil and petroleum products: Association of Oil Pipe Lines. *Shifts in Petroleum Transportation*. (Washington, DC: various years).

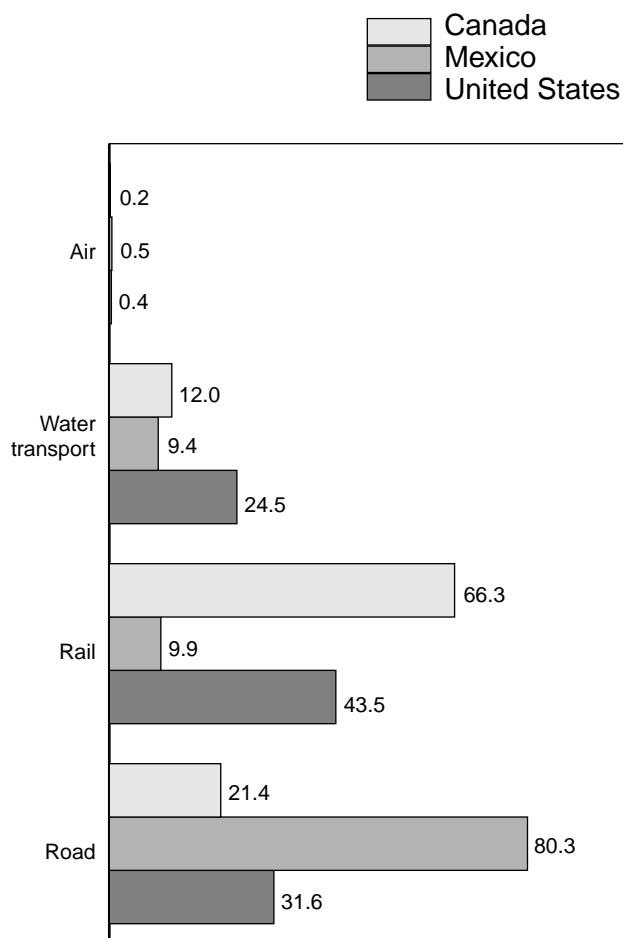
Pipeline, natural gas: U.S. Department of Transportation. Bureau of Transportation Statistics. Special tabulation based on Department of Energy data. (Washington, DC: 1999).

Rail: Association of American Railroads. *Railroad Facts, 1997*. (Washington, DC: 1997).

Road: Eno Transportation Foundation, Inc. *Transportation in America, 1997*. (Lansdowne, VA: 1997).

figure 5-2a

Percent Modal Share,
Excluding Pipelines, of Total
Metric Ton-Kilometers: 1996



Because pipeline data for Mexico are unavailable, pipeline has been excluded from each country's total for overall ton-kilometers and the derived modal shares in this figure. Figure 5-2b shows the modal shares for Canada and the United States when pipelines (both oil and gas) are included.
Notes and sources: See Table 5-2.

figure 5-2b

Percent Modal Share,
Including Pipelines, of Total
Metric Ton-Kilometers: 1996

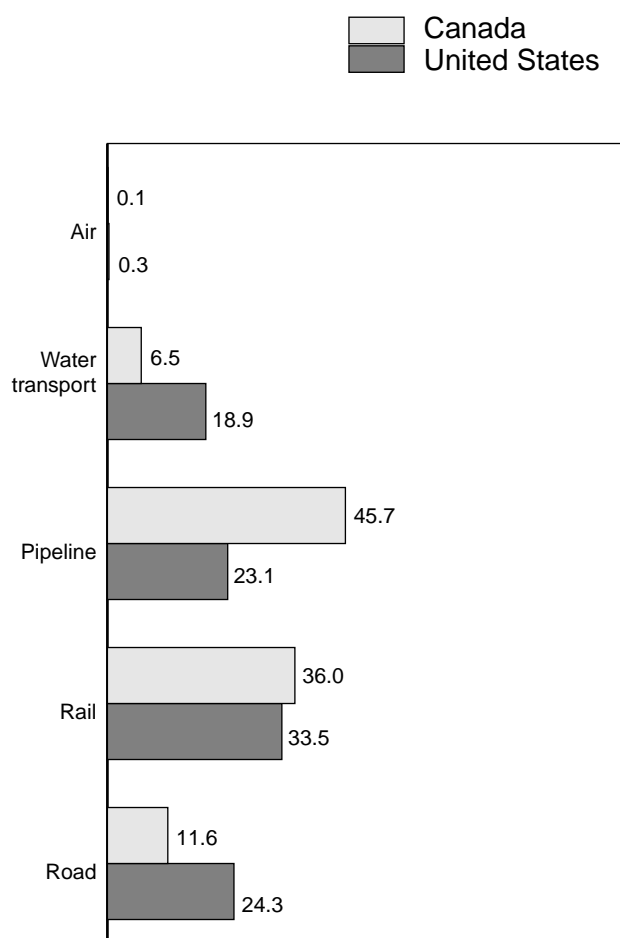


Figure 5-2b shows the modal shares for Canada and the United States when pipelines (both oil and gas) are included. Figure 5-2b more accurately portrays modal shares for Canada and the United States than figure 5-2a, which excludes pipeline data.
Notes and sources: See Table 5-2.

t a b l e 5-3a

Top Canadian Domestic Freight Commodities by Mode: 1996

(Millions of metric tons)

Mode of transportation	Total	Mode of transportation	Total
Air		Road	
N	N	Forest products	40.3
		Live animals and food products	24.0
Pipeline		Petroleum products	23.1
Natural gas	120.1	Construction materials	18.4
Crude oil	118.9	Steel	14.4
Petroleum products	64.5	Water transport	
		Iron ore	7.0
Rail		Pulpwood and chips	6.7
Bituminous coal	39.8	Wheat	4.8
Iron ore and concentrates	37.4	Stone and limestone	4.7
Wheat	20.3	Fuel oil	4.3
Muriate of potassium (potash)	12.3	Intermodal	
Pulpwood and chips	11.7	N	N

KEY: N = Data are nonexistent.

SOURCES

Pipeline: Statistics Canada. *Oil Pipeline Transport, Catalogue No. 55-201-XPB, 1996*. (Ottawa, Ont.: 1997). Statistics Canada. *Gas Utilities, Transport and Distribution Systems, Catalogue No. 57-205-XPB, 1996*. (Ottawa, Ont.: 1997).

Rail: Statistics Canada. *Rail in Canada, Catalogue No. 52-216-XPB, 1996*. (Ottawa, Ont.: 1998).

Road: Statistics Canada. Transportation Division. Special for-hire trucking tabulations for Transport Canada. (Ottawa, Ont.: 1998).

Water transport: Transport Canada. Economic Analysis Directorate. (Ottawa, Ont.: 1998). (Tabulations derived from Statistics Canada's Marine Database.)

t a b l e 5-3b

Top Mexican Domestic Freight Commodities by Mode: 1996

(Millions of metric tons)

Mode of transportation	Total	Mode of transportation	Total
Air		Road	
N	N	Miscellaneous manufactured articles	51.2
		Salt, sulfur, plaster and cement	36.0
Pipeline		Mineral fuels, oils and waxes	28.9
Crude oil	U	Edible fruits and vegetables	19.9
Natural gas	U	Beverages, spirits and vinegar	18.6
Petroleum products	U	Water transport	
		Crude oil and petroleum products	19.4
Rail		Limestone	7.3
Cement	9.3	Salt	6.3
Corn	5.9	Iron ore pellets	1.4
Iron ore	3.9	Cement	0.1
Coal	2.8	Intermodal	
Fuel oil	2.4	N	N

KEY: U = Data are unavailable. N = Data are nonexistent.

NOTES

Road and water transport: Data are for 1993.

Road and rail: Data include foreign trade merchandise.

SOURCES

Rail: Secretaría de Comunicaciones y Transportes. Based on data from the Ferrocarriles Nacionales de México. *Series Estadísticas*, 1996. (Mexico City, D.F.: 1997).

Road: Instituto Mexicano del Transporte based on the vehicle's weight and dimensions study. (Sanfandila, Qro.: 1997).

Water transport: Secretaría de Comunicaciones y Transportes. Coordinación General de Puertos y Marina Mercante. (Mexico City, D.F.: 1997).

Top U.S. Domestic Freight Commodities by Mode: 1993

(Millions of metric tons)

Mode of transportation	Total	Mode of transportation	Total
Air		Road	
Machinery, excluding electricals	0.46	Nonmetallic minerals	1,364.6
Chemicals or allied products	0.32	Petroleum or coal products	900.6
Electrical machinery, equipment or supplies	0.25	Food or kindred products	674.2
Transportation equipment	0.24	Lumber or wood products, excluding furniture	529.0
Instruments, photographic and optical goods, watches or clocks	0.09	Chemicals or allied products	281.7
		Water transport	
Pipeline		Petroleum and petroleum products	844.2
Crude oil	925.0	Crude materials	327.1
Petroleum products	771.9	Coal	272.5
Natural gas	502.6	Food and farm products	244.3
		Chemicals and related products	119.4
Rail		Intermodal (road and rail combination)	
Coal	572.5	Transportation equipment	6.9
Farm products	158.7	Chemicals or allied products	1.9
Nonmetallic minerals	131.5	Food or kindred products	1.7
Petroleum or coal products	123.6	Lumber or wood products, excluding furniture	1.5
Chemicals or allied products	118.2	Pulp, paper or allied products	1.4

SOURCES

Air, road and rail: U.S. Department of Commerce. U.S. Census Bureau. *1993 Commodity Flow Survey*. Special tabulation. (Washington, DC: 1998).

Pipeline: U.S. Department of Transportation. Bureau of Transportation Statistics. Special tabulation. (Washington, DC: 1998).

Water transport: U.S. Army Corps of Engineers (USACE). *Waterborne Commerce of the United States, Calendar Year 1996; Part 5 - National Summaries*. (New Orleans, LA: 1997).

t a b l e 5-4a

Top Canadian Domestic Freight Interprovincial Pairs by Mode: 1996

(Thousands of metric tons)

Mode of transportation	Total	Mode of transportation	Total
Air		Québec to Ontario	6,845
N	N	Alberta to British Columbia	3,048
		British Columbia to Alberta	2,060
Pipeline		Alberta to Saskatchewan	1,781
N	N		
Rail		Water transport	
Alberta to British Columbia	29,335	Ontario to Québec	6,187
Newfoundland to Québec	20,875	Québec to Ontario	5,963
Saskatchewan to British Columbia	12,890	Nova Scotia to Newfoundland	810
Saskatchewan to Ontario	8,249	Nova Scotia to Québec	745
Ontario to Québec	4,677	Nova Scotia to New Brunswick	680
Road		Intermodal	
Ontario to Québec	7,002	N	N

KEY: N = Data are nonexistent.

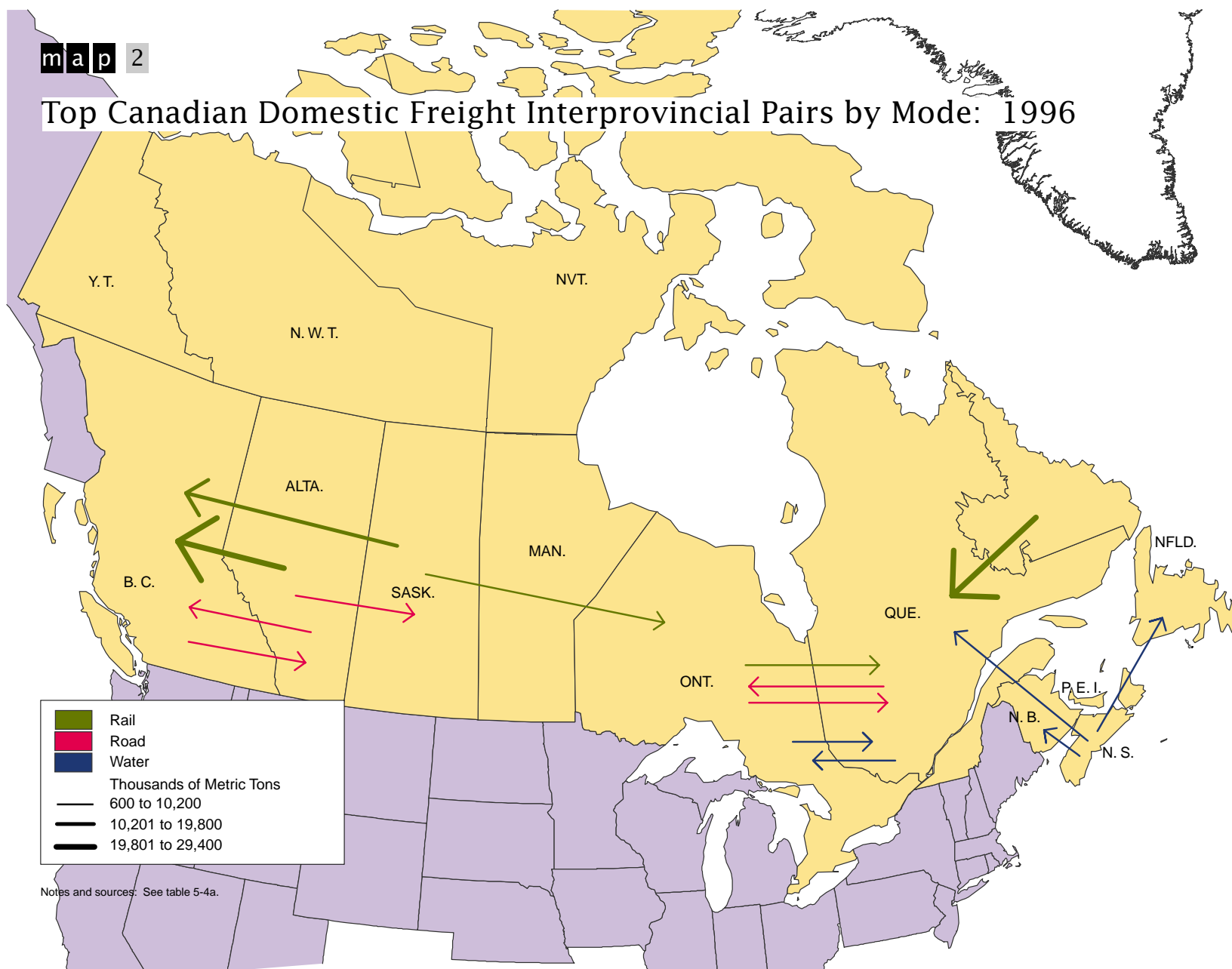
NOTE: Data represent one-way flows.

SOURCES

Rail: Transport Canada. Economic Analysis Directorate. (Ottawa, Ont.: 1998). (Rail data adapted by Transport Canada from Statistics Canada sources.)

Road: Statistics Canada. Transportation Division. Special for-hire trucking tabulations for Transport Canada. (Ottawa, Ont.: 1998).

Water transport: Transport Canada. Economic Analysis Directorate. (Ottawa, Ont.: 1998). (Tabulations derived from Statistics Canada's Marine Database.)



t a b l e 5-4b

Top U.S. Domestic Freight Interstate Pairs by Mode: 1993

(Thousands of metric tons)

Mode of transportation	Total	Mode of transportation	Total
Air		Illinois to Indiana	18,008
California to Texas	39	Pennsylvania to New Jersey	16,991
California to New Jersey	27	Michigan to Ohio	15,056
Indiana to California	22	New Jersey to New York	14,587
New Jersey to California	16	Water transport	
California to Georgia	15	Illinois to Louisiana	18,416
Pipeline		Missouri to Louisiana	11,088
N	N	West Virginia to Pennsylvania	10,938
Rail		Louisiana to Texas	8,828
Wyoming to Texas	37,608	Iowa to Louisiana	8,628
West Virginia to Virginia	21,640	Intermodal	
Wyoming to Kansas	19,472	(road and rail combination)	
Wyoming to Missouri	18,507	Kentucky to Michigan	988
Illinois to Indiana	17,200	California to Michigan	313
Road		Ohio to California	298
Indiana to Illinois	25,978	Illinois to California	261
		Michigan to Florida	163

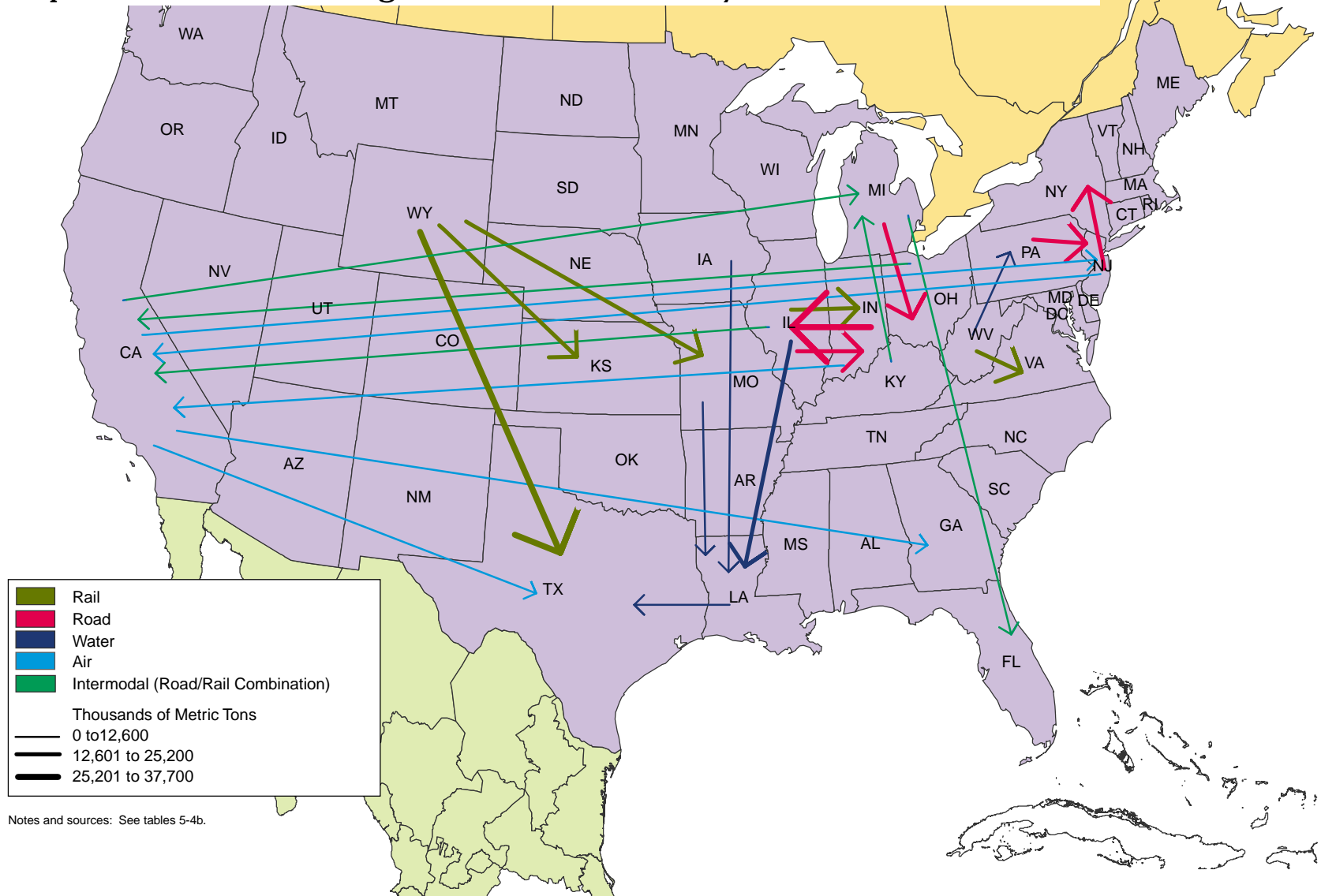
KEY: N = Data are nonexistent.

NOTE: Data represent one-way flows.

SOURCE: U.S. Department of Commerce. U.S. Census Bureau. *1993 Commodity Flow Survey*. Special tabulation. (Washington, DC: 1998).

map 3

Top U.S. Domestic Freight Interstate Pairs by Mode: 1993



t a b l e 5-5a

Top Canadian Domestic Freight Area Pairs by Mode: 1996

(Thousands of metric tons)

Mode of transportation	Total	Mode of transportation	Total
Air		Toronto, Ont. to Hamilton, Ont.	964
N	N	Montréal, Que. to Québec, Que.	919
Pipeline		Water transport	
N	N	Sept-Îles/Pte-Noire, Que. to Hamilton, Ont.	3,294
		Havre-St-Pierre, Que. to Sorel, Que.	2,447
Rail		Port-Cartier, Que. to Hamilton, Ont.	2,065
N	N	Colborne, Ont. to Clarkson, Ont.	1,824
Road		Fraser River, B.C. to East Coast Vancouver Island, B.C.	1,625
Hamilton, Ont. to Toronto, Ont.	2,716	Intermodal	
Toronto, Ont. to Montréal, Que.	2,061	N	N
Montréal, Que. to Toronto, Ont.	1,623		

KEY: N = Data are nonexistent.

NOTE: Data represent one-way flows. Water data represent port to port pairs rather than metropolitan area pairs.

SOURCES

Road: Statistics Canada. Transportation Division. Special for-hire trucking tabulations for Transport Canada. (Ottawa, Ont.: 1998).

Water transport: Transport Canada. Economic Analysis Directorate. (Ottawa, Ont.: 1998). (Tabulations derived from Statistics Canada's Marine Database.)

Top Mexican Domestic Freight Area Pairs by Mode: 1996

(Thousands of metric tons)

Mode of transportation	Total	Mode of transportation	Total
Air		Road	
Mexico City, D.F. to Guadalajara, Jal.	6	Mexico City, D.F. to Nuevo Laredo, Tamps.	12,700
Mexico City, D.F. to Tijuana, B.C.	5	Mexico City, D.F. to Monterrey, N.L.	7,400
Mexico City, D.F. to Cancún, Q. Roo.	4	Mexico City, D.F. to Guadalajara, Jal.	6,100
Guadalajara, Jal. to Mexico City, D.F.	4	Mexico City, D.F. to Veracruz, Ver.	4,700
Mexico City, D.F. to Monterrey, N.L.	4	Mexico City, D.F. to Toluca, Edo. de Mex.	4,400
Pipeline		Water transport	
U	U	Guerrero Negro, B.C.S. to Isla de Cedros, B.C.	7,400
Rail		Pajaritos, Ver. to Tuxpan, Ver.	4,000
Nuevo Laredo, Tamps. to Monterrey, N.L.	1,553	Salina Cruz, Oax. to Guaymas, Son.	2,300
Nuevo Laredo, Tamps. to Mexico City, D.F.	1,271	Salina Cruz, Oax. to Manzanillo, Col.	2,100
Veracruz, Ver. to Mexico City, D.F.	803	Salina Cruz, Oax. to Lázaro Cárdenas, Mich.	1,300
Ciudad Sahagún, Hgo. to Mexico City, D.F.	783	Intermodal	
Nuevo Laredo, Tamps. to Guadalajara, Jal.	697	N	N

KEY: N = Data are nonexistent. U = Data are unavailable.

NOTES

Data represent one-way flows.

Rail: Figures of 1993, based on allocation studies (see Appendix B).

Road: Figures of 1994, from a survey of motor carrier vehicles on federal roads (see Appendix B).

Water transport: Data represent port to port pairs rather than metropolitan area pairs.

SOURCES

Air: Instituto Mexicano del Transporte based on special tabulation of the Secretaría de Comunicaciones y Transportes. Dirección General de Aeronáutica Civil. (Sanfandila, Qro.: 1999).

Rail: Instituto Mexicano del Transporte. *Evaluación Económica de Mejoras a la Infraestructura del Sistema Nacional Ferroviario, Publicación Técnica No. 82*. Estimates included in this document are based on information from the Ferrocarriles Nacionales de México. (Sanfandila, Qro.: 1996).

Road: Instituto Mexicano del Transporte. Special tabulation from *Estudio de pesos y dimensiones de los vehiculos de carga que circulan en la red nacional de carreteras, 1994*. (Sanfandila, Qro.: 1999).

Water transport: Secretaría de Comunicaciones y Transportes. Coordinación General de Puertos y Marina Mercante. (Mexico City, D.F.: 1997).

map 4

Top Mexican Domestic Freight Area Pairs by Mode: 1996

